

SABIC Innovative Plastics Cycloy® XCM851 PC+ABS (Europe-Africa-Middle East)

Category : Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Unreinforced , Polycarbonate (PC)

Material Notes:

High heat PC/ABS blend offering high modulus / low CTE and good practical impact This data was supplied by SABIC-IP for the Europe-Africa-Middle East region.

Order this product through the following link:

http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Cycloy-XCM851-PCABS-Europe-Africa-Middle-East.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D 792
Density	1.30 g/cc	0.0470 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.010 %	0.010 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.20 % @Temperature 23.0 °C	0.20 % @Temperature 73.4 °F	ISO 62
Linear Mold Shrinkage, Flow	0.0030 - 0.0050 cm/cm @Thickness 3.20 mm	0.0030 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	9.0 g/10 min @Load 5.00 kg, Temperature 260 °C	9.0 g/10 min @Load 11.0 lb, Temperature 500 °F	[cm ³ /10 min] Melt Volume Rate; ISO 1133
	12 g/10 min @Load 5.00 kg, Temperature 260 °C	12 g/10 min @Load 11.0 lb, Temperature 500 °F	ASTM D 1238

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	35.0 MPa	5080 psi	Type I, 5 mm/min; ASTM D 638
	45.0 MPa	6530 psi	5 mm/min; ISO 527
Tensile Strength, Yield	55.0 MPa	7980 psi	5 mm/min; ISO 527
	60.0 MPa	8700 psi	Type I, 5 mm/min; ASTM D 638
Elongation at Break	10 %	10 %	5 mm/min; ISO 527
	12 %	12 %	Type I, 5 mm/min; ASTM D 638
Elongation at Yield	4.0 %	4.0 %	Type I, 5 mm/min; ASTM D 638
	4.0 %	4.0 %	5 mm/min; ISO 527

Mechanical Properties	Metric	English	Comments
	4.75 GPa	689 ksi	5 mm/min; ASTM D 638
Flexural Yield Strength	100 MPa	14500 psi	2 mm/min; ISO 178
	108 MPa	15700 psi	1.3 mm/min, 50 mm span; ASTM D 790
Flexural Modulus	4.40 GPa	638 ksi	2 mm/min; ISO 178
	4.55 GPa	660 ksi	1.3 mm/min, 50 mm span; ASTM D 790
Izod Impact, Notched	0.800 J/cm	1.50 ft-lb/in	ASTM D 256
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.00 J/cm	1.87 ft-lb/in	ASTM D 256
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Notched (ISO)	9.00 kJ/m ²	4.28 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	12.0 kJ/m ²	5.71 ft-lb/in ²	80*10*3; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	80*10*3; ISO 180/1U
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	NB	NB	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.50 J/cm ²	7.14 ft-lb/in ²	V-notch Edgew 80*10*3 sp=62mm; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Impact Test	60.0 J	44.3 ft-lb	Instrumented Impact Total Energy; ASTM D 3763
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	41.0 µm/m-°C	22.8 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	41.0 µm/m-°C	22.8 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	56.0 µm/m-°C	31.1 µin/in-°F	

CTE, linear, Transverse to Flow Thermal Properties	Metric @ Temperature -40.0 - 40.0 °C	English @ Temperature -40.0 - 104 °F	ASTM E 831 Comments
	56.0 µm/m-°C	31.1 µin/in-°F	ISO 11359-2
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
Deflection Temperature at 1.8 MPa (264 psi)	122 °C	252 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	119 °C	246 °F	unannealed; ASTM D 648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Vicat Softening Point	138 °C	280 °F	Rate B/50; ASTM D 1525
	139 °C	282 °F	Rate B/50; ISO 306
	140 °C	284 °F	Rate B/120; ISO 306

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